The preceding table demonstrates that typical high-end consumption patterns could result in exposures exceeding the reference dose rate if they consume fish species with elevated concentrations of MeHg. For adult male consumers, levels of concern are greater than 0.9 ppm MeHg, a relatively high concentration but one typically encountered in several species of eastern North Carolina freshwater fish, including largemouth bass (*Micropterus salmoides*) and bowfin (*Amia calva*). For pregnant women, frequent consumption of fish with MeHg concentrations above 0.3 ppm could lead to toxicologically significant fetal exposures. This level of MeHg is relatively common in many species of freshwater fish, especially in eastern North Carolina.

To estimate theoretical safe fish MeHg concentrations for "average" consumers of freshwater fish a presumed consumption rate of one to two meals per month with average meal sizes reported by NHANES III will be used here (EPA 1997a). The resulting range of fish MeHg concentrations are significantly elevated above typical values found in North Carolina freshwater fish.

Average Consumers of Freshwater Fish				
Exposure Group	**MeHg Reference Dose**	**Adjusted for Body Weight**	**Estimated Fish Consumption Rate**[18]	**Theoretical Safe $[MeHg]_{fish}$**
Women of child-bearing age	0.167 µg/kg/day	13.5 µg/day	5.2 - 10.4 g/day	1.1 - 2.2 ppm (µg/g)
Adult males	0.5 µg/kg/day	39.1 µg/day	9.0 - 18.0 g/day	2.2 – 4.3 ppm (µg/g)

The estimates in the preceding two tables are presented using mean consumption data. As discussed earlier, this estimate of population consumption rate will overstate the actual rate of consumption for the majority of fish consumers since there was a smaller subset of individuals that ate disproportionately more fish than the majority. However, this value will also significantly under-represent consumption rates for those at the high end of the scale. For example, the maximum consumption rate reported in the Savannah River cohort was over seven times the average rate of consumption. This pattern of variability is captured in figures 3 and 4 in Burger, 1999 (see below). The same pattern is seen in the distribution of hair mercury levels from the Waccamaw Study cohort, presented below (p. 17) and may relate to the variability in fish consumption habits within that study population.

[18] Estimated by multiplying meal size by frequency per month, and dividing by 30.5 days/mo.